Claim Amendments

Claims 1-14 (Previously canceled)

Claims 15-29 (canceled)

Claims 30-36 (Previously canceled)

37. (Previously presented) A method of manufacturing a magnetic head device, comprising:

forming a thin film magnetic head element over a substrate, the thin film magnetic head element including a magnetoresistance (MR) element;

cutting the substrate, the MR element being exposed on a side surface of the substrate;

polishing the side surface, thereby forming a magnetically degenerated layer on the side surface, after polishing the MR element having a stripe height that is substantially equal to a target stripe height plus an additional dimension, the additional dimension being substantially equal to a depth of the magnetically degenerated layer; and

removing the magnetically degenerated layer from at least a region of the side surface that includes the MR element.

38. (Previously presented) The method of claim 37 wherein removing the magnetically degenerated layer comprises etching the at least said region.

39. (Previously presented) The method of claim 37 wherein removing the magnetically degenerated layer comprises milling the at least said region.

40. (Previously presented) The method of claim 37 wherein forming the thin film magnetic head element comprises:

forming a first shield layer over the substrate;

forming a first half gap layer over the first shield layer;

forming the MR element over the first half gap layer;

forming a second half gap layer over the MR element; and

forming a second shield layer over the second half gap layer.

41. (Previously presented) The method of claim 37 wherein removing the magnetically degenerated layer comprises etching the magnetically degenerated layer until the stripe height of the MR element is substantially equal to the target stripe height.

42. (Previously presented) A method of manufacturing a magnetic head device, comprising:

forming a thin film magnetic head element over a substrate, the thin film magnetic head element including a magnetoresistance (MR) element;

cutting the substrate, the MR element being exposed on a side surface of the substrate;

polishing the side surface, thereby forming a magnetically degenerated layer on the side surface, after polishing the MR element having a stripe height that is substantially equal to a target stripe height plus an additional dimension, the additional dimension being substantially equal to a depth of the magnetically degenerated layer; and

etching the magnetically degenerated layer from at least a region of the side surface that includes the MR element until the stripe height of the MR element is substantially equal to the target stripe height.

43. (Previously presented) The method of claim 42 wherein forming the thin film magnetic head element comprises:

forming a first shield layer over the substrate;

forming a first half gap layer over the first shield layer;

forming the MR element over the first half gap layer;

forming a second half gap layer over the MR element; and

forming a second shield layer over the second half gap layer.

44. (Currently amended) The method of claim 43 further comprising:

forming an inductive head element over the substrate, the inductive head element including upper and lower magnetic pole layers separated by a gap layer, wherein the lower magnetic pole layer is common with the second shield layer.

45. (Previously presented) The method of claim 44 wherein the gap layer comprises a material consisting essentially of silicon oxide, tantalum pentoxide, or a beryllium-copper alloy.

46. (Previously presented) The method of claim 42 wherein the magnetically degenerated layer is approximately 1000 angstroms thick.

47. (Previously presented) The method of claim 44 wherein the gap layer and the first and second half gap layers comprise a nonmagnetic material other than alumina.

48. (Previously presented) A method of manufacturing a magnetic head device, comprising:

forming a thin film magnetic head element over a substrate, the thin film magnetic head element including a magnetoresistance (MR) element having a stripe height;

cutting the substrate, the MR element being exposed on a side surface of the substrate;

polishing the side surface to form an air-bearing surface (ABS) with a magnetically degenerated layer; and

etching the ABS to a depth of 1/30 or greater, but less than 1/10, of the stripe height, wherein etching of the ABS substantially removes the magnetically degenerated layer.

49. (Previously presented) The method of claim 48 wherein forming the thin film magnetic head element comprises:

forming a first shield layer over the substrate;

forming a first half gap layer over the first shield layer;

forming the MR element over the first half gap layer;

forming a second half gap layer over the MR element; and

forming a second shield layer over the second half gap layer.

50. (Currently amended) The method of claim 49 <u>further comprising:</u>

<u>forming an inductive head element over the substrate, the inductive head element including upper and lower magnetic pole layers separated by a gap layer,</u> wherein the lower magnetic pole layer is common with the second shield layer.

51. (Previously presented) The method of claim 49 wherein the gap layer comprises a material consisting essentially of silicon oxide, tantalum pentoxide, or a beryllium-copper alloy.

52. (Previously presented) The method of claim 48 wherein the magnetically degenerated layer is approximately 1000 angstroms thick.

53. (New) The method of claim 37 further comprising:

coating the side surface with a diamond-like carbon material after removing the magnetically degenerated layer.

54. (New) The method of claim 37 further comprising forming a nonmagnetic undercoat layer on the substrate.

55. (New) The method of claim 37 further comprising forming air-bearing surface rail parts in the side surface of the substrate.

56. (New) The method of claim 44 wherein the first shield layer and the upper and lower magnetic pole layers comprise a magnetic material having an etch rate that is substantially the same as an etch rate of the nonmagnetic material.

57. (New) The method of claim 42 further comprising:

coating the side surface with a diamond-like carbon material after removing the magnetically degenerated layer.

58. (New) The method of claim 42 further comprising forming a nonmagnetic undercoat layer on the substrate.

59. (New) The method of claim 42 further comprising forming air-bearing surface rail parts in the side surface of the substrate.

60. (New) The method of claim 50 wherein the first shield layer and the upper and lower magnetic pole layers comprise a magnetic material having an etch rate that is substantially the same as an etch rate of the nonmagnetic material.

61. (New) The method of claim 48 further comprising:

coating the side surface with a diamond-like carbon material after removing the magnetically degenerated layer.

62. (New) The method of claim 48 further comprising forming a nonmagnetic undercoat layer on the substrate.

63. (New) The method of claim 48 further comprising forming air-bearing surface rail parts in the side surface of the substrate.